



Energy Efficient Travel Fact Sheet

Overview

Transportation generates about one-third of the greenhouse gases emitted in the United States, and Amtrak and train travel offer an alternative for reduced impacts on the environment. Amtrak supports programs to reduce greenhouse gas emissions and providing energy-efficient transportation.

A Vehicle for Change

Amtrak passenger rail service provides an energy-efficient mode of transportation. With the electrified Amtrak Northeast Corridor and plans to expand the electrified territory, Amtrak already provides the advantages of “plug-in” electric technology that autos are just beginning to develop.

From programs aimed at allowing individual passengers to offset their carbon footprints to recycling, from environmental management to industrial housekeeping, from energy-efficient facilities to wildlife protection, Amtrak is committed to being part of the “generation that could,” in terms of making the necessary changes to protect the environment.

Energy Conservation

Passenger rail travel is 20 percent more efficient¹ than airline travel and 28 percent more efficient than automobile travel. Since 2003², Amtrak has cut its diesel fuel use by more than five percent while increasing train frequencies on many routes.

In its Chicago yard, Amtrak has installed a wind turbine and solar panels for a signaling system and in the Northeast Corridor, where trains already run on electricity, solar panels have been added to power 50 track lubrication systems. Services between Boston, New York and Washington use electric locomotives which can use regenerative braking. This is when the braking friction generates electricity while slowing the train. The resulting electricity can then be returned to the power system through the overhead wire. Approximately 80 percent³ of the electric fleet uses regenerative braking.

Amtrak is also taking measures to reduce the use of petroleum products, improving efficiency and reducing air emissions:

- Reducing the amount of “idling” time of diesel locomotives
- Using dynamic and regenerative braking systems to return energy to the grid on electric locomotives
- Employing bio-lubricants in hydraulic systems
- Using lighter and more aerodynamic vehicle carriers on the Auto Train[®]

Carbon Footprint

Amtrak is a charter member of the Chicago Climate Exchange. This organization uses a market-based system to reduce carbon dioxide emissions. Amtrak has committed to reduce emissions from diesel locomotives by six percent from 2003 through 2010, the largest voluntary commitment in the United States. Through 2008, Amtrak has exceeded all of the interim required reduction targets.

Amtrak’s partnership with Carbonfund.org gives customers the opportunity to purchase carbon offsets for their travel on Amtrak, making it easy and affordable to reduce the carbon impact of their personal Amtrak trip to zero. The offsets provided through this partnership have three areas of investment focus: renewable energy, energy efficiency and reforestation. By choosing passenger rail travel and offsetting emissions at Carbonfund.org, Amtrak customers can travel carbon neutral.

To learn more about offsetting carbon footprints, visit www.carbonfund.org.

¹ DOE 2009 Transportation Energy Data Book

² *Ink* – Volume 13, Issue 4, April 2008

³ 29 of 49 AEM-7 (AC units), 15 HHP-8, 40 Acela (total of 104 – 84 AC units – 80 percent of Amtrak fleet)

Freight Railroads

Freight rail transportation is an efficient form of surface transportation. A freight train can move one ton of freight 457 miles on a single gallon of diesel fuel. It also helps control air emissions. If 10 percent of long-haul freight now moving by truck moved by rail, annual greenhouse gas emissions would fall by more than 12 million tons. American railroads move 40 percent of our nation's freight, but account for just 2.2 percent of all transportation-related greenhouse gas emissions, and just 0.6 percent of total U.S. greenhouse gas emissions.

Freight railroads are three times more fuel-efficient than trucks and emit three times less carbon dioxide (CO₂) than trucks for the same transportation service. In 2003 alone, railroads increased their efficiency by consuming 2.8 billion fewer gallons of fuel in the United States — and emitted 31.5 million fewer tons of CO₂ — than they would have if their efficiency had remained constant since 1980.⁴

Environmental Management

The Amtrak Environmental Management System has programs to improve environmental performance through operating procedures, facilities management, pollution prevention, communication and training. Examples of these efforts include:

- Recycling programs for bottles, cans and newspapers on trains, in stations and in Amtrak facilities system wide
- Cleanup of historic railroad contamination. Some Amtrak sites have contamination that dates back to Amtrak's predecessor railroads
- Employee environmental awareness and regulatory training
- An applied research program to mitigate train / bald eagle collisions and protect this species along the Hudson River in New York

Web site

www.whistlestop.amtrak.com or the annual Amtrak Environmental Health & Safety report can be accessed at www.amtrak.com

⁴ Association of American Railroads website